Paraplegia **30** (1992) 923–931 © 1992 International Medical Society of Paraplegia

Cumulative Contents

Editorial 1
The way ahead 3
P Harris
Reflections on the International Medical Society of Paraplegia and management of paraplegia 5
R Carter
International Medical Society of Paraplegia—11 years on 9
H L Frankel
Fifty years on fundamentals in spinal cord injury care are still important 10
G Bedbrook
Paraplegia: views from the Chief Scientist Office 14
D Dodwell
The spinal cord injury primary physician. One riot—one ranger 17
J S Young
A message from Dr David F Apple Jr MD 20
An appreciation of *Paraplegia*, the International Journal of The Spinal Cord, and its role as a coordinator of information 21
B P Gardner
The scientific committee of the International Medical Society of Paraplegia 22
P Dollfus
Neural transplants in spinal cord injury 23
J C Horvat
The evolution of the spinal cord unit: East and West 27
W H Donovan
Spinal cord injuries in the 21st century 31
P Harris
Spinal injury in Scotland 35
P Edmond
Spinal injury associations: a British perspective 37
J Hart
The evolution of neuroimaging of spinal cord injury patients over the last decade 39
M Perovitch, H Wang and S Perl
Spinal injuries: early surgical treatment 43
R A Dickson
Conservative versus surgical treatment of the cervical and thoracolumbar spine in spinal trauma 46
M E Brooks
Neurourology in spinal cord injured patients 50
J J Wyndaele
Sexual dysfunctions in the spinal cord injured 54
R Stien
Psychosocial research in spinal cord injury: the state of the art 58
R B Trieschemann
Bioengineering developments for paraplegic patients 61
J C Barbenel and J P Paul
The current state of the management of the upper limb in tetraplegia 65
D W Lamb
Progress of comprehensive rehabilitation of patients with spinal cord lesions in Germany 1962–1990 68

F W Meinecke
Rehabilitation: some thoughts on progress **70**
I Bromley
Clinical rehabilitation research advances in spinal cord injury **73**
J A DeLisa
Meetings and Notices **75**
Spinal cord injuries: the last decade and the next **77**
D J Brown
Spinal cord repair: future directions **83**
J W Fawcett
Indian spinal injuries centre **86**
A S Chahal
New spinal cord injury standards, 1992 **90**
J F Ditunno Jr
Development of neurophysiological aspects of the spinal cord during the past ten years **92**
M R Dimitrijevic
Neural prostheses: clinical applications of functional electrical stimulation in spinal cord injury **96**
P H Peckham and G H Creasey
Pharmacological treatment of acute spinal cord injury: current status and future prospects **102**
M B Bracken
Community reintegration and quality of life following spinal cord injury **108**
M J De Vivo and J S Richards
Postural thixotrophy: a significant factor in the stiffness of paralysed limbs? **113**
E G Walsh
Pressure sores: a personal comment **116**
J C McGregor
The role of intracavernous injection of vasoactive medications for the restoration of erection in spinal cord injured males: a three year followup **118**
D R Bodner, B Leffler and F Frost
The effect of intermittent positive pressure breathing on lung volumes in acute quadriparesis **121**
K Stiller, R Simionato, K Rice and B Hall
The effect of intravesical Marcain instillation on hyperreflexic detrusor contractions **127**
P D McInerney, A Grant, J Chawla and T P Stephenson
Long term follow up of spinal cord injury caused by penetrating missiles **131**
M E Brooks, R Brouner and A Ohry
The management of spinal cord injury patients in Greece **135**
C B Petropoulou, Ch-A G Rapidi, M Beltsios, G Karantonis and Pr E Lampiris
Spinal cord injury due to suicide attempts **139**
F Biering-Sørensen, W Pedersen and P Giørtz Müller
Obituary **145**
E R Griffiths
Sir George Montario Bedbrook: a tribute **148**
G M Pool
Meetings and Notices **149**
Bladder pressure and kidney function in children with myelomeningocoele: review article **153**
R L Vereecken

Hangman's fracture in Singapore (1975–1988) 160
E S Tan and N Balachandran
Human osteoblast stimulation by sera from paraplegic patients with heterotopic ossification 165
M H J Kurer, M A Khoker and P Dandona
Prophylactic low dose heparin anticoagulant therapy in patients with spinal cord injuries: a retrospective study 169
J R Kulkarni, A A Burt, A T Tromans and P D L Constable
Suicide following acute traumatic spinal cord injury 173
F K Judd and D J Brown
Modified Brown-Séquard syndrome following coronary artery bypass graft: case report 178
M H Gottesman, I Saraya and F Tenti
Brown-Séquard syndrome due to Semple antirabies vaccine: case report 181
H S Swamy, A Vasanth and Sasikumar
The prevalence of hyperhidrosis in patients with spinal cord injuries and an evaluation of the effect of dextropropoxyphene hydrochloride in therapy 184
L S Andersen, F Biering-Sørensen, P G Müller, I L Jensen and B Aggerbeck
Sexual issues of women with spinal cord injuries 192
S W Charlifue, K A Gerhart, R R Menter, G G Whiteneck and M S Manley
Septic ischial bursitis in patients with spinal cord injury 200
S Rubayi and J Z Montgomerie
Increased serum osteocalcin levels in patients with paraplegia 204
P Pietschmann, P Pils, W Woloszczuk, R Maerk, D Lessan and J Stipicic
Anourethral reflex. Description of a reflex and its clinical significance: preliminary study 210
A Shafik
The social and vocational outcome of spinal cord injury patients 214
M Taricco, C Columbo, R Adone, G Chiesa, S Di Carlo, M Borsani, E Castelnuovo, G Ghirardi, R Lascioli and A Liberati
The management of an old fused hip after the occurrence of paraplegia 220
M D Ryan and J J Henderson
Electrical stimulation of the lumbrical muscles in an incomplete quadriplegic patient: case report 223
S G Carroll, S F Bird and D J Brown
Meetings and Notices 227
Laufband locomotion with body weight support improved walking in persons with severe spinal cord injuries 229
A Wernig and S Müller
Ambulation using the reciprocating gait orthosis and functional electrical stimulation 239
E Isakov, R Douglas and P Berns
Physiological cost index of paraplegic locomotion using the ORLAU ParaWalker 246
A V Nene and S J Jennings
Voiding by increased abdominal pressure in male spinal cord injury patients – long term follow up 253
A Greenstein, K S Rucker and P G Katz
Bladder outlet resistance decreasing operations in spinal cord damaged patients with vesicoureteral reflux 256
H Burgdoerfer and A Bohatyrewicz

Exertional hypertension in thoracic spinal cord injury: case report 261
M L King, D M Freeman, J T Pellicone, E R Wanstall and L D Bhansali
The effectiveness of a pressure clinic in preventing pressure sores 267
H Dover, W Pickard, I Swain and D Grundy
The role of intracavernosal vasoactive agents to overcome impotence due to spinal cord injury 273
C M Earle, E J Keogh, J K Ker, D J Cherry, A G S Tulloch and D J Lord
Ossification of the posterior longitudinal ligament in the thoracic spine causing intermittent paraplegia in an Englishman: case report 277
H Nakamura, H V Crock, B P Galbally and J Dawson
Health and psychosocial issues of individuals with incomplete and resolving spinal cord injuries 282
K A Gerhart, R L Johnson and G G Whiteneck
A second traumatic spinal cord injury: associated risk factors. Case report and review 288
J A Sliwa, A C Lim and E J Roth
Preoperative embolisation, transpedicular decompression and posterior stabilisation for metastatic disease of the thoracic spine causing paraplegia 292
S Y Bhojraj, A V Dandawate and R Ramakantan
The role of motor evoked potentials in the management of hysterical paraplegia: case report 300
D A Jellinek, R Bradford, I Bailey and L Symon
Meetings and Notices 303
Current advances in magnetic resonance imaging (MRI) in spinal cord trauma: review article 305
M Perovitch, S Perl and H Wang
Psychological and sociological theories concerning adjustment to traumatic spinal cord injury: the implications for rehabilitation 317
K R Whalley Hammell
Use of penile prostheses to maintain external condom catheter drainage in spinal cord injury patients 327
I Perkash, J N Kabalin, S Lennon and V Wolfe
Studies of bladder sensitivity in patients with myelodysplasia 333
J J Wyndaele
Endoscopically guided bladder neck suspension for continence in paraplegic women with implant driven micturition 336
L Cardozo and G S Brindley
Hyperpyrexia in spinal injury patients 339
A Essiet and O Onuba
Bone mineral and hormone status in paraplegics 343
V Finsen, B Indredavik and K J Fougner
Cardiovascular and vasoactive hormone responses to bladder distension in spinal and normal man 348
H Krum, W J Louis, D J Brown, S J Clarke, J A Fleming and L G Howes
Fatal cerebral hemorrhage due to autonomic dysreflexia in a tetraplegic patient: case report and review 355
I Eltorai, R Kim, M Vulpe, H Kasravi and W Ho
Is the appearance of periarticular new bone formation related to local neurological disability? 361
A Catz, D Snir, Z Groswasser, L Mendelson and P Solzi
Long term follow up of patients with cauda equina syndrome due to intraspinal lipoma 366
A Ohry, M Azaria and G Zeilig

Surgical considerations in patients with lumbar spinal root anomalies 370
M N Pamir, M M Özek, A F Özer, G E Keleş and C Erzen
Thigh compartment syndrome secondary to intertrochanteric hip fracture in a quadriplegic patient: case report 376
R L Rimoldi and D A Capen
Meetings and Notices 379
Risk factors for cardiovascular disease in chronic spinal cord injury patients 381
H Krum, L G Howes, D J Brown, G Ungar, P Moore, J J McNeil, W J Louis
The role of the diaphragm in trunk extension in tetraplegia 389
C Sinderby, P Ingvarsson, L Sullivan, I Wickström, L Lindström
The neurosensory musculocutaneous tensor fasciae latae flap: long term results 396
W Kuhn, N J Luscher, R de Roche, S Krupp, G A Zäch
Changes in thyroid hormones, thyroid stimulating hormone and cortisol in acute spinal cord injury 401
J M Bugaresti, C H Tator, J D Silverberg, J P Szalai, D G Malkin, A Malkin, S K Tay
The effects of sauna on tetraplegic and paraplegic subjects 410
H J Gerner, P Engel, G C Gass, E M Gass, T Hannich, G Feldmann
Vocational decision making by sixty spinal cord injury patients 420
R Crisp
Psychological approach to the rehabilitation of the spinal cord injured: the contribution of relaxation techniques 425
J L Curcoll
Aerobic power of competitive paraplegic road racers 428
S P Hooker, C L Wells
The value of urodynamics and bladder management in predicting upper urinary tract complications in male spinal cord injury patients 437
W Killorin, M Gray, J K Bennett, B G Green
Spinal cord lesion after penicillin gluteal injection 442
L Tesio, L Bassi, L Strada
Acute paraplegia resulting from haemorrhage into a spinal neurofibroma 445
S-T Lee, T-N Lui
Esophageal perforation: a delayed complication following traumatic spinal cord injury. Case report 449
S Colachis III, K D Murray
Meetings and Notices 454
The hyperflexed seemingly useless tetraplegic hand: a method of surgical amelioration 457
W J Treanor, E Moberg and H J Buncke
Effects of functional electrical stimulation (FES) on evoked muscular output in paraplegic quadriceps muscle 467
E Rabischong and F Ohanna
Reduction of seating pressure using FES in patients with spinal cord injury. A preliminary report. 474
A C B Ferguson, J F Keating, M A Delargy and B J Andrews
Breathing pattern adjustments during the first year following cervical spinal cord injury 479
B Loveridge, R Sanii and H I Dubo
An investigation of the relationship between environmental factors and job satisfaction in intensive nursing, with particular reference to spinal trauma 489
O Nugent, C A Glass, K R Krishnan and J D Bingley
The algesic syndrome in spinal cord trauma 497

A V Livshits
Short-latency somatosensory evoked potentials (SSEPs) of the tibial nerves in spinal cord injuries 502
A Kovindha and R Mahachai
The measurement of muscle tone 507
E G Walsh
A comparative study of the muscle strength and mass of the arm flexors and extensors in paraplegic and in non paraplegic basketball players 509
P Calmels, S Berthouze, F G Barra, M Domenach and P Minaire
Primary multiple spinal extradural hydatid cysts of the literature: case report and review 517
M Bavbek, S Inci, K Tahta and V Bertan
The older adult with a spinal cord injury 520
E J Roth, L Lovell, A W Heinemann, M Y Lee and G M Yarkony
Pregnancy in a quadriplegic patient treated with continuous intrathecal baclofen infusion to manage her severe spasticity. Case report. 527
E M Delhaas and J Verhagen
Book Reviews 529
Meetings and Notices 531
Neurological and skeletal outcomes in 113 patients with closed injuries to the cervical spinal cord 533
W H Donovan, D X Cifu, D E Schotte
Motor vehicle crashes and spinal injury 543
E C Wigglesworth
An open trial of vacuum penile tumescence: constriction therapy for neurological impotence 550
L Heller, O Keren, R Aloni, G Davidoff
Transcutaneous nitroglycerin in the treatment of erectile dysfunction in spinal cord injured 554
J Sønksen, F Biering-Sørensen
Mechanical plus pharmacological prophylaxis for deep vein thrombosis in acute spinal cord injury 558
G J Merli, S Crabbe, L Doyle, J F Ditunno, G J Herbision
Return to work after spinal cord injury: the potential contribution of physical fitness 563
L Noreau, R J Shephard
Maximal exercise response of paraplegic wheelchair road racers 573
R A Cooper, S M Horvath, J F Bedi, D M Drechsler-Parks, R E Williams
Symptomatic postprandial hypotension in high paraplegia. Case report 582
A Catz, L Mendelson, P Solzi
Recurrent dislocation of the hip in adult paraplegics 587
G P Graham, C M Dent, P D Evans, B McKibbin
An outline of the programme of rehabilitation medical services in the People's Republic of China: 1991–1995 592
Chen Zhong-Wu
Graves' disease complicating myelopathy 593
J H Frisbie, B Fisch
The application of a modified neuroprosthetic hand system in a child with a C7 spinal cord injury. Case report 598
B T Smith, M J Mulcahey, R J Triolo, R R Betz
Meetings and Notices 607
Recent developments in neurosurgical spinal cord monitoring 609
J Schramm, M Kurthen

Mortality, morbidity, and psychosocial outcomes of persons spinal cord injured more than 20 years ago 617
G G Whiteneck, S W Charlifue, H L Frankel, M H Fraser, B P Gardner, K A Gerhart, K R Krishnan, R R Menter, I Nuseibeh, D J Short, J R Silver

An audit of five years' experience of pregnancy in spinal cord damaged women. A regional unit's experience and a review of the literature 631
P A Feyi-Waboso

Traumatic injury to the spinal cord. Prevalence in Brazilian hospitals 636
A Campos da Paz, P S S Beraldo, M C R R Almeida, E G C Neves, C M F Alves, P Khan

Traumatic spinal cord injuries in Turkey 641
F Dincer, A Oflazer, M Beyazova, R Çeliker, O Basgöze, K Altioklar

A clinical exercise system for paraplegics using functional electrical stimulation 647
L A Bremner, K E Sloan, R E Day, E R Scull, T Ackland

Tracheostomy in spinal cord injured: frequency and follow up 656
M Biering-Sørensen, F Biering-Sørensen

Cystic cord lesions and neurological deterioration in spinal cord injury: operative considerations based on magnetic resonance imaging 661
M Silberstein, O Hennessy

Electromyographic registration of diaphragmatic fatigue during sustained trunk flexion in cervical cord injured patients 669
C Sinderby, P Ingvarsson, L Sullivan, I Wickström, L Lindström

Solitary spinal osteochondroma causing neural syndromes 678
A Prasad, P N Renjen, M L Prasad, G B Bhatty, V S Madan, T B S Buxi, S P Agarwal

Obituary 681
Gerald Henry Ungar

Meetings and Notices 682

Interdisciplinary treatment of spina bifida children 683
T Redaelli, A Cassinis, F Cosignani, B Conti, MP Onofri, A Dall'Acqua

Spinal cord injury: 10 and 15 years after 690
L A Cushman, J Hassett

Depressed serum high density lipoprotein cholesterol levels in veterans with spinal cord injury 697
W A Bauman, A M Spungen, You-Gong Zhong, J L Rothstein, C Petry, S K Gordon

Suggested MRI criteria for surgical decompression in acute spinal cord injury. Preliminary observations 704
M Silberstein, D Brown, B M Tress, O Hennessey

Bacterial biofilm formation in the urinary bladder of spinal cord injured patients 711
G Reid, R Charbonneau-Smith, D Lam, Yun Suk Kang, M Lacerte, K C Hayes

Results of the combined treatment of paediatric intraspinal tumours 718
F Dincer, C Dincer, M K Baskaya

Lumbar spine dimensions in paraparetic patients: a 10 year follow up study 729
A Catz, I Reider-Grosswasser, I Gutman, R Gepstein, L Mendelson

Postoperative wound infections following myocutaneous flap surgery in spinal injury patients 734
M Garg, S Rubayi, J Z Montgomerie

Incidence and risk factors in the appearance of heterotopic ossification in spinal cord injury 740
P Bravo-Payno, A Esclarin, T Arzoz, O Arroyo, C Labarta

Use of the biceps femoris following failed inferior gluteal flap transfer. Case report 746
W O Thomas, G Bjorn Stark, J O Basadre, S W Parry
Urinary lithiasis induced by sulfamethoxazole in a patient with tetraplegia. Case report 750
M Rince, P Dudognon, C Moesch, C Leroux-Robert
Book reviews 752
Erratum 755
Meetings and Notices 757
Assessment of rehabilitation in patients with spinal cord injuries: methodological considerations 759
P Daverat
Spinal cord injury: prognosis for ambulation based on quadriceps recovery 762
K S Crozier, Ling Ling Cheng, V Graziani, G Zorn, G Herbison, J F Ditunno Jr
Repeated measurements of pulmonary function following spinal cord injury 768
M H Bluechardt, M Wiens, S G Thomas, M J Plyley
Lipid profiles in spinal cord injury 775
D Cardús, F Ribas-Cardús, W G McTaggart
Bladder rehabilitation with dorsal rhizotomy and ventral neuroprosthesis 783
L S Baskin, R A Schmidt
Vertebral osteomyelitis following manipulation of spondylitic necks – a possible risk 788
M Lewis, D Grundy
Physeal injuries in myelomeningocele patients 791
A Cuxart, J Iborra, M Meléndez, E Pagès
Management of pyogenic vertebral osteomyelitis with spinal cord compression in the elderly 795
R Gepstein, Y Folman, C Lidor, V Barchilon, A Catz, T Hallel
A psychological study of spinal cord injured patients involved in the Madras Paraplegia Project 799
O Somasundaram, S Balakrishnan, O S Ravindran, T K Shanmugasundaram
Computerized quantitative radionuclide assessment of heterotopic ossification in spinal cord injury patients 803
Sun W Kim, Sing Yung Wu, R C Kim
Peripheral nerve block with phenol to treat spasticity in spinal cord injured patients 808
S Gündüz, T A Kalyon, H Dursun, H Möhür, F Bilgiç
Book Reviews 812
Meetings and Notices 817
Editorial 819
A cross-sectional study of the relationship between age and current health status for persons with spinal cord injuries 820
M J DeVivo, R M Shewchuk, S L Stover, K J Black, B K Go
Young spinal cord injured patients in nursing homes: rehospitalization issues and outcomes 828
S I Weingarden, P Graham
New estimates of the direct costs of traumatic spinal cord injuries: results of a nationwide survey 834
C Harvey, S E Wilson, C G Greene, M Berkowitz, T E Stripling
Correlation of bacteriological flora of the urethra, glans and perineum with organisms causing urinary tract infection in the spinal injured male patient 851
D G Barnes, A G Timoney, G Moulas, P J R Shaw, P J Sanderson

N-nitrosamine generation by urinary tract infections in spine injured patients **855**
D J Stickler, D Phil, J C Chawla, A R Tricker, R Preussmann
Event-related brain potentials during orienting to auditory and visual stimulation in spinal cord injured humans **864**
M J Cohen, S L Schandler, M Vulpe
Enhanced carotid–cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics **872**
K A Engelke, J D Shea, D F Doerr, V A Convertino
An examination of dietary intakes and nutritional status of chronic healthy spinal cord injured individuals **880**
A M Levine, M S Nash, B A Green, J D Shea, M J Aronica
Pregnancy, labor and delivery post spinal cord injury **890**
L L Cross, J M Meythaler, S M Tuel, A L Cross
Oesophageal trauma in patients with spinal cord injury **903**
G M English, Shih-Fong Hsu, R Edgar, M Gibson-Eccles
Meetings and Notices **913**
Indexes **915**
Cumulative Contents **923**